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09/741,639

12/20/2000

Vlad Mitlin

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06/13/2005

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EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,639

Applicant(s)

MITLIN ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-25 and 33-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 9-25 and 33-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This is in response to amendment filed on 2/28/05. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection. In addition the allowability of claims 9-25 and 33-49 has been withdrawn.

Claim Rejections

Claims 9 and 33 are rejected as incomplete because they depend on a base canceled claim.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 11-17 and 35-41 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15, 26-29 and 40 of copending Application No US 2002/0118766 A1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 11 and 35 encompassed by claims 15, 26-29 and 40, respectively.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. Claims 18-25, 42-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 28-32, 18, 33, 36, 61-65, 51 of copending Application No. 20023/0105997 A1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 18-25, 42-49 encompassed by claims 1, 4, 28-32, 18, 33, 36, 61-65, 51, respectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al U.S. Patent No 6,445,773 B1.

As per 10 and 34 Liang et al teaches a method of determining throughput in a multicarrier transmission system, comprising: determining the throughput of a channel in an upstream and downstream direction (see col.5, lines 51-54 and col.8, lines 8-10) in accordance to a summing equation.

However Liang et al does teach in accordance with the following equation: $H_u = \max u = \min \{ V_u / [N_d K_d 1 - (1 - p_d) k_d p_d + M_u K_u V_u V_d (1 m_u + 1 - p_u p_u) (1 - (1 - p_u) k_u)], V_u / [M_d K_d V_d V_u (1 m_d + 1 - p_d p_d) (1 - (1 - p_d) k_d) + N_u K_u 1 - (1 - p_u) k_u p_u] \}$, and $H_d = \max d = \min \{ V_d / [N_d K_d 1 - (1 - p_d) k_d p_d + M_u K_u V_u V_d (1 m_u + 1 - p_u p_u) (1 - (1 - p_u) k_u)], V_d / [M_d K_d V_d V_u (1 m_d + 1 - p_d p_d) (1 - (1 - p_d) k_d) + N_u K_u 1 - (1 - p_u) k_u p_u] \}$, wherein $M_{sub.d}$ represents a length of an acknowledgment frame in a downstream direction, $K_{sub.d}$ represents the length of an information field in the downstream direction, $M_{sub.d}$ represents a number of information frames between positive acknowledgment frames in the downstream direction, $p_{sub.d}$ represents a probability of an information frame being accepted in the downstream direction, $k_{sub.d}$ represents a maximum number of transmissions in the downstream direction, $\lambda_{sub.d}$ represents a number of information bits per unit time in the downstream direction, $N_{sub.d}$ represents a total frame length in the downstream direction, $M_{sub.u}$ represents a length of an acknowledgment frame in an upstream direction, $N_{sub.u}$ represents a total frame length in the upstream direction, $K_{sub.u}$ represents the length of an information field in the upstream direction, $m_{sub.u}$ represents a number of information frames between positive acknowledgment frames in the upstream direction, $p_{sub.u}$ represents a probability of an information frame being accepted in the upstream direction, $k_{sub.u}$ represents a maximum number of transmissions in the upstream direction, $\lambda_{sub.u}$ represents a number of information bits per unit time in the upstream

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direction, $V_{sub.u}$ represents a data rate in the upstream direction, and $V_{sub.d}$ represents a data rate in the downstream direction.

Since the summing equation of Liang performs the same function or arrive to the same result as to determine the upstream and downstream of a channel. Therefore it would have been obvious to one of ordinary skill in the art to come up with an equation in relationships to the current claim as a matter of choice to perform the same function.

Allowable Subject Matter

5. Claims 1-5 are allowed over the prior art of record.
6. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to anticipate or render obvious the following recited features:. Superimpose the upstream data flow and the downstream data flow to determine a channel data flow as recited in claim 4. Determining data flow for the channel in terms of an input intensity, and a probability of having a frame having no or correctable number of errors and adjusting channel performance in accordance with the data flow as recited in claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM)
Alternate Friday off.

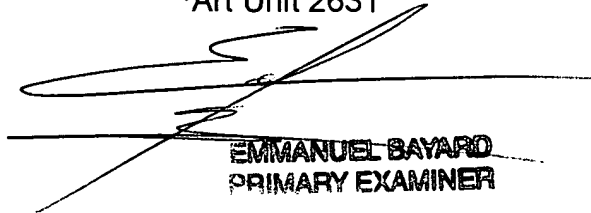
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/10/05

Emmanuel Bayard
Primary Examiner
Art Unit 2631



EMMANUEL BAYARD
PRIMARY EXAMINER